

Nuclear Division News



A Newspaper for Employees of the Nuclear Division, Union Carbide Corporation

Vol. 8/No. 17 September 1, 1977

Retirees' increase approved by ERDA

The Nuclear Division's request for an increase in retirement benefits for employees who retired before January 1, 1976, has been approved by ERDA. This increase was announced by Union Carbide Corporation in June for retirees from privately owned plants.

The increase will be effective July 1, 1977, for pension and disability benefits received from the Non-Contributory Pension Plan and for benefits under the Contributory Retirement Plan except for payments being made to a beneficiary under the "ten-year-certain" provisions.

These new benefits will be paid to employees who retired before January 1, 1976, or to survivors of such retirees or to survivors of employees who died before January 1, 1976, if a benefit currently is being received from the Pension Plan or from the Contingent Annuitant Option provisions of the Retirement Plan.

The amount of the increase will vary from 8 percent to 12 percent prorated by months depending on the year of retirement as shown in the condensed table below:

Retirement Date	Increase
Dec. 1, 1975	8%
Sept. 1, 1975	8.5%
June 1, 1975	9%
Mar. 1, 1975	9.5%
Dec. 1, 1974	10%
Sept. 1, 1974	10.5%
June 1, 1974	11%
Mar. 1, 1974	11.5%
Dec. 1, 1973 and earlier	12%

Since significant improvements were made on January 1, 1976, in the regular benefits formula used to calculate retirement benefits for employees under the Pension Plan, the present monthly benefit for those who retired on and after January 1, 1976, will not be affected by this adjustment. This increase also will not apply to "vested right" benefits of employees whose employment ended before qualifying for retirement.

It is expected that the increased payments will be included in regular retirement benefit checks beginning October 1. A separate check for the months of July, August and September will be mailed shortly thereafter.

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ORGBP engineer designs solar home

"I would like to live in one of those solar homes, but they're all so ugly."

How many times have you heard that one? Well, Pete Scott has designed one, lives in it, and it's a long way from being ugly.

The house is a split-level with fieldstone and masonite siding, and covers 2,300 square feet with options for additional space at a later date. It sits on a large wooded lot in the rural area north of ORGBP.

Scott, a mechanical engineer at ORGBP, spent almost two years designing the exact angles at which the collector panels should be placed to absorb the most sunlight. Installation costs for the system ran about \$4,000 more than a conventional system. But in about 10 years, the system will have paid for itself in fuel savings.

Heat stored in rocks

The solar home utilizes large integral solar collector panels of multi-layered transparent plastic on the south roof. Sunlight shines through the top layers and is absorbed into the dark surface below. Air circulating through the collectors picks up the heat and transfers it through a ductwork system, to some 90 tons of rock stored in an insulated bin beneath the house. Air then is circulated to the house when heating is required. Coils of copper tubing run through the rock to absorb some of the heat for the home's hot water supply.

And what about cloudy days or overcast weather when there is no sunshine? Scott designed the home, after a survey of weather between 1951 and 1974, and came up with a composite year of the worst weather conditions. Even under such circumstances of the past 23 years, the system would provide a sufficient amount of energy to heat the home and keep an ample supply of hot water on hand.

Hartland Estates

The home is in Hartland Estates, a new subdivision located in a rural area off Blair Road, about six miles

End of summer holiday Monday

Monday, September 5, is an official holiday for Nuclear Division employees, as Labor Day is observed.

Labor Day is the oldest official national holiday we mark. No employee is required to be at work unless his/her presence is required by continuous operations for plant security.



FIELDSTONE TUDOR—Pete Scott, left, and Len Hart stand before Scott's solar heated home in Hartland Estates. Scott moved his family into the expansive home in February, and expects his solar heating system to be fully operational by cold weather. Hart recently took early retirement from Y-12, and Scott is an engineer at ORGBP.

from work for Scott. The subdivision was developed by Len Hart, who took early retirement from the Y-12 Plant recently, to devote full time to his business interests. The large lots, located in the Dyllis area, have all the conveniences of city-living . . . paved streets, water and sewerage and all other utilities.



SOLAR PANELS—The south side of the roof of Scott's home features the transparent solar panels where the sun's heat is caught and transferred to a rock-storage bin underneath the house.

Scott expects his system to last from 50 to 100 years, which means free heating for the last 90 percent of the system's lifetime.

An experimental solar cooling system is planned for the home in the future.

System ready for winter

Scott foresees more and more homes using solar energy. "I expect to see this type of system in wide usage for home heating in the next 10 years. It will take longer for solar energy to be applicable to commercial and industrial areas, however. But it will be a long while before solar energy replaces nuclear and other conventional energy sources."

The Scotts moved into their new home in February, and the solar heating system will be operational for the beginning of the heating season this year. "We expect to keep our thermostat at 72 in the winter, and 76 in the summer," he said.

Scott, a native of Williamson, W. Va., moved to Oak Ridge with his parents and graduated from Oak Ridge High School. He has a B.S. in mechanical engineering from the University of Tennessee, and in May of this year became a registered professional engineer in the state.

He and his wife, Patricia, have a nine-month-old daughter, Whitney Ruth.

anniversaries

ORNL

30 YEARS

Ted C. Russell, Plant and Equipment; Hubert N. Wilson, Instrumentation and Controls; William A. Bird, Instrumentation and Controls; Leroy D. Vest, Computer Sciences; John H. Coobs, Metals and Ceramics; and Ernie P. Griggs, Metals and Ceramics.

25 YEARS

James D. Fultz, Alex H. Anderson Jr., Frank L. Layton, Norval F. Ziegler, Joseph G. Scarborough, Ernest L. Fair, Floyd H. Watson, Robert A. Francis Jr., Ellison G. Price, William F. Rogers, Williams H. Hicks and Kenneth O. Seiber.

20 YEARS

Harold R. Payne, Luther P. Pugh, James A. Steed Jr., and James E. Thompson.

PADUCAH

25 YEARS

James C. Clark, Ray C. Perry, Robert E. Clark and Charles F. Spencer.

ORGDP

30 YEARS

Andrew J. Thomason, General Accounting Division; and Charles R. Tedder, Instrument Fabrication Department.

25 YEARS

Fred W. Ammons, Kenneth E. Deal, Paul E. Melroy and James S. Herron.

20 YEARS

Clay Parrott and Juanita P. Church.

Y-12 PLANT

30 YEARS

Isaac H. Tackett Jr., Utilities Administration; and Freddy D. Marler, Special Services.

25 YEARS

Marian M. Luallen, Emanuel G. Laggis, Dean A. Ford and Harry F. Henderson.

20 YEARS

Charles E. Oldham, Harry L. Bailey and Dorris N. Smith.

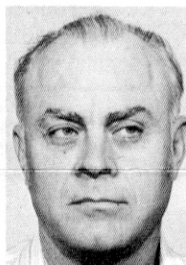
division deaths...

Frank A. Sherrill, a research associate in Solid States at ORNL, died August 19 in the Cumberland Memorial Hospital.

A native of Cumberland County, Mr. Sherrill was a veteran of World War II. He joined Union Carbide in 1948.

Survivors include his wife, Aileen Sherrill, Crab Orchard; two daughters, Mrs. Wallace Austin and Mrs. William Cooper; one granddaughter; his mother, Mrs. Leland Sherrill; brothers, Bud and E. L. Serrill Jr.; sisters, Opal McNeal, Nellie Slean, Pansy O'Berg, Wanda Hild and Connie Davis.

Funeral services were held at the Bilbrey Funeral Home, Crossville, with burial in Haley's Grove Cemetery, Crab Orchard.



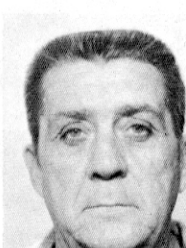
Mr. Sherrill

Howard A. Mayes, Y-12's Buildings, Grounds and Maintenance Department, died August 17 in a Knoxville hospital.

A native of Knoxville, he first joined Y-12 in 1954 and worked until 1962, and re-joined Union Carbide in 1967. He worked with Robertshaw Controls prior to World War II and was a veteran of the U. S. Navy.

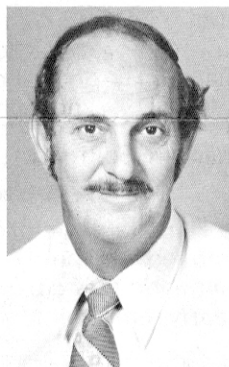
Survivors include his wife, Colena Taylor Mayes, Route 26, Kern Road, Knoxville; a daughter, Mrs. Alvarez Bryant; sons, Howard A. Jr. and Elvis Mayes; father, Joseph E. Mayes; brother, Ellis Mayes and two grandsons.

Funeral services were held at Rose's Chapel, with interment in Highland Memorial Cemetery.



Mr. Mayes

Morgan promoted ORGDP supervisor



Morgan

John B. Morgan has been named a supervisor in Fabrication and Maintenance at ORGDP.

A native of Loudon, Morgan joined Union Carbide in early 1976, after serving as an electronics material officer in the U.S. Navy.

He and his wife, Nancy, live at Route 15, Ball Road, Knoxville. They have three children, Angela, Kimberlee and John Braxton II.

wanted...

Y-12

CAR POOL MEMBERS from Broad Acres, Powell, to any portal, 8-4:30. R. C. Bryant, plant phone 3-7168, home phone 947-3214.

ORNL

WILL JOIN CAR POOL OR VAN POOL from Claxton, Edgemoor Rd., area to East Portal, 8-4:30 shift, straight days. Betty Queen, plant phone 3-6265, home phone 945-2992.

RIDE OR JOIN CAR POOL from Andover Circle, Oak Ridge, any portal, straight days. Wilma Stair, plant phone 3-6401, home phone 483-3114.



19th CENTURY CABIN—Freels Cabin, located at the center of the UT-CARL employee picnic area, has been recommended for nomination to the National Register of Historic Places. (The home is located in an ERDA restricted area and is not accessible to the public.)

Historic sites studied at ORNL

A new awareness of the long-term cultural importance of building sites on the Oak Ridge Reservation has evolved following a "historic sites reconnaissance" conducted by staff of the University of Tennessee's Anthropology Department, under contract with the Nuclear Division.

The researchers located, inventoried and evaluated 415 historic sites and structures on the reservation, some dating back to the late 18th century. Their survey will serve as part of a total inventory of the natural and cultural resources in the area which is currently being compiled by the Environmental Sciences Division at ORNL.

The survey covered Scarboro and Wheat, two of four old communities in the area. Scarboro community is the present site of the UT Comparative Animal Research Laboratory (UT-CARL), while Wheat community was located near the present intersection of Oak Ridge Turnpike and Blair Road, east of ORGDP.

Before the Federal Government bought the land for the Manhattan Project in 1942, the reservation consisted mostly of farmland. About 1,000 families (3,000 persons) lived in the area, and when they moved, they left a variety of structures behind them.

These structures were categorized into four groups depending on their condition: no physical remains

present; foundation only; partially standing structure; and standing structure.

Only about 20 percent of the sites examined contained standing or partially standing structures. Some of them probably were razed by former residents who were bought out by the government. Others may have been torn down in the 1950's when there was a move to salvage usable building materials from standing structures.

One of the most outstanding structures remaining on the Reservation is the Freels Cabin, located at the center of the UT-CARL employee picnic area. It was noted by the researchers as "an excellent example of nineteenth century log architecture," with "workmanship of the highest caliber," and has been recommended for nomination to the National Register of Historic Places. Other houses which have been removed from their original sites now serve as housing for UT-CARL personnel.

A round log constructed house, a fieldstone constructed building and a single crib barn with a shake roof were among the structures found on the reservation. Another historic structure which can be seen from Bethel Valley Road near ORNL is the grave house in Bethel Cemetery.

The information on historic sites also will contribute to ERDA's efforts to preserve the cultural resources under its scope.

wanted...



ORNL

CAR POOL MEMBERS from areas of West Outer, Waddell, Pennsylvania or Hillside, Oak Ridge, to East Portal, 8:15 to 4:45. Tom Burnett, plant phone 3-6939, home phone 483-1975.

ORGDP

FORM CAR POOL from Karns area to any portal, 8-4:30. E. W. Pritchard, plant phone 3-9573; home phone 947-3773.

TWO CAR POOL members from Rockwood to Portal 4, straight day. John Grove, plant phone 3-3667, home phone Rockwood 354-3948.

question box

If you have questions on company policy, write the Editor, **Nuclear Division News** (or telephone your question in, either to the editor, or to your plant contact). Space limitations may require some editing, but pertinent subject matter will not be omitted. Your name will not be used, and you will be given a personal answer if you so desire.

Raise vs inflation

QUESTION: My recent annualized merit increases have been less than the increase in the cost of living. In face of continued rising inflation, what chance is there of a general wage increase for salaried employees this calendar year?

ANSWER: Although economic conditions are taken into account when salary programs are planned each year, it is not UCC's policy to give general wage increases to salaried employees. The current rate of inflation, between 6%-7% annualized, was anticipated when the 1977 salary program was developed late last year.

In most cases, salary increases are equal to or exceed the change in the cost of living. However, if an individual's level of performance does not justify his/her position in the rate range, an increase could be less than the CPI change.

Job bidding system

QUESTION: Recently several bidders with four to six years' experience in the General Accounting Division were disqualified for an accounting position by the coordinator. No interviews were granted, yet another applicant with less than one year of experience was granted an interview. Why doesn't the supervisor with the opening interview all bidders?

ANSWER: The administration of the Job Opportunity System (JOS) at ORGDP is described in the JOS booklet issued there. The system provides that all bidders be screened by the coordinator to assist the hiring supervisor. Based on information and recommendations supplied by the coordinator, the hiring supervisor decides which applicants to interview.

In connection with the opening we think you refer to, there were six bidders; three of these were interviewed and one selected to fill the opening.

Interviewing individuals who clearly do not meet the position's requirements might offer false encouragement and, in our judgment, would not serve a useful purpose.

Improper vehicle usage

QUESTION: A female employee at ORGDP is picked up at Portal 7 every morning in an "Official Use Only" automobile and driven through the plant to her office. Is this not an improper use of a government vehicle?

ANSWER: Unless properly authorized due to a medical or another legitimate reason, the use of a government vehicle in the

manner which you describe would be improper. ORGDP management is investigating your allegation, and if they find any improprieties, corrective action will be taken.

Job bidding

QUESTION: There was a job bid on the board for a weekly salaried employee indicating a position in Engineering at ORGDP, involving secretarial duties and carrying the title of administrative aide in job level 6. It appears that it is the same job as the secretary to a division head. Why are not all division secretaries classified at this level?

ANSWER: The job bid to which you refer was for a secretarial position, but for a position as secretary to a manager to whom several division managers report. The secretaries of the division managers reporting to this level are at the same level as are other division secretaries.

Dean Waters named deputy director Separations Systems

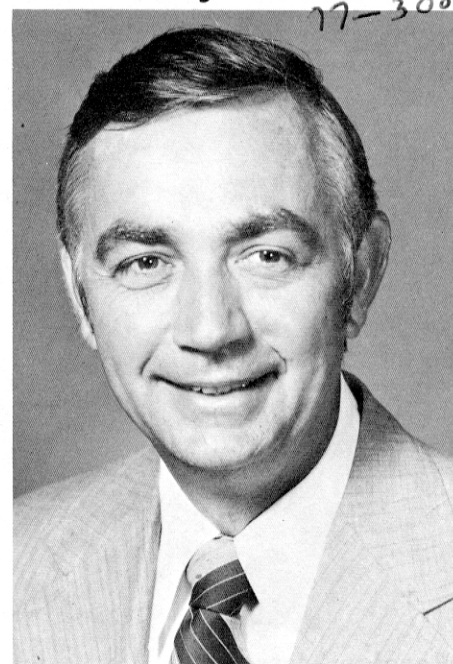
Dean A. Waters has been appointed deputy director of the Separations Systems Division at ORGDP. He will be responsible for the internal operation of the division.

Waters, a 17-year Union Carbide veteran, began in Operations Planning and has worked in the Gaseous Diffusion Development and Separations Systems Divisions. A native of Jersey City, N.J., he holds a B.E. in mechanical engineering and a B.S. in industrial administration from Yale University, and an M.S. in nuclear engineering from North Carolina State University.

He taught at NCSU and worked with the Public Service Electric and Gas Company, New Jersey, before joining the Nuclear Division.

In making the announcement, William J. Wilcox Jr., Technical Director for the Nuclear Division, stated, "The new challenges faced by Separation Systems Division in developing and providing technology for the gas centrifuge plant will require teamwork within the Division and the continued cooperation of other groups involved in the program, both at ORGDP and Y-12."

Waters, a registered professional engineer, is a member of both the Tennessee and National Society of Professional Engineers.



Dean A. Waters

He and his wife, Jacquelyn, live at 109 Locust Lane, Oak Ridge. They have three children, Christopher, Heather and Geoffrey.

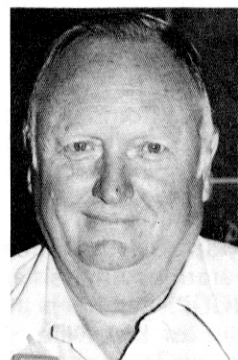
patents...

To Robert C. Anderson, Y-12 Plant, for "Diffusion Bonding."

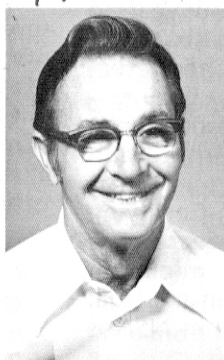
To Samuel T. Benton, Y-12 Plant, for "Fabrication of Boron Particles."

To William L. Harper and Charles G. Peck, ORGDP; and Jonathan S. Bullock, Y-12 Plant, for "Electromarking Solution."

retirements...



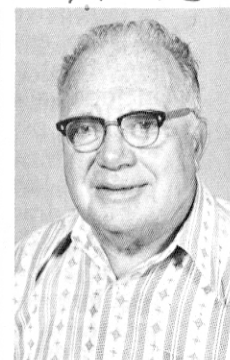
George G. Cantrell
Dimensional Inspection
Y-12
23 years service



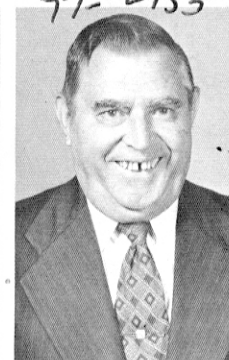
Bonner B. Martin
ORGDP Maintenance
26 years service



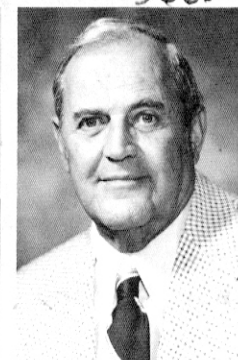
Sylvia P. Hatmaker
Beta-2 Chemistry
Y-12
33 years service



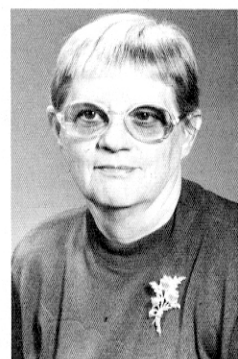
James R. Manis
ORGDP Maintenance
24 years service



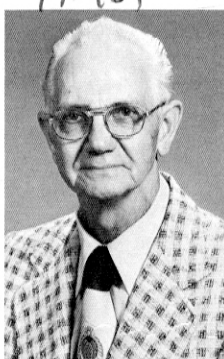
Loys S. Goins
ORGDP Shop Services
32 years service



Morris F. Phillips
Physics, ORNL
29 years service



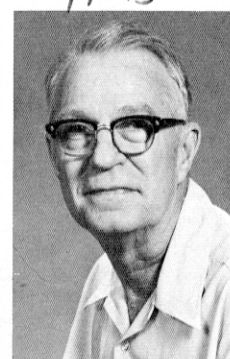
Ruth M. Stemple
Information, ORNL
10 years service



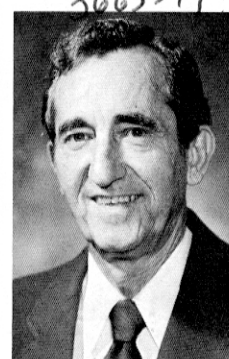
George F. Smith
Y-12 Garage
19 years service



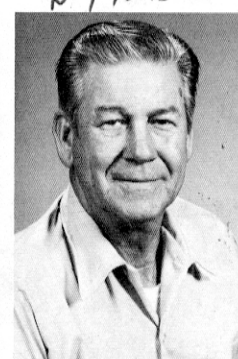
Clyde W. Wise
Y-12 Building Services
25 years service



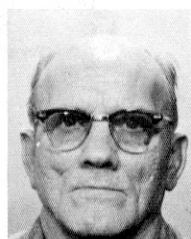
John S. Jones
Y-12 Electrical
24 years service



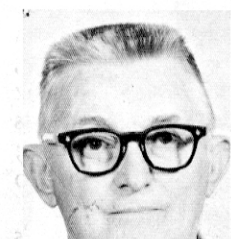
James S. Woodard
Plant and Equipment
ORNL
26 years service



Alexander Berry
Y-12 General Shops
25 years service



James C. Brewer
Y-12 Utilities
24 years service



Robert E. Ligon
Fabrication & Maintenance
Paducah
26 years service

next issue...

The next issue will be dated September 15. The deadline is September 7.

577-146



Bernice Massengill

5242-1



Genevieve Warren

PH77-3040



Wyvetta Ratledge

More CPS's than a



Kay Hamilton

Twelve women in the Nuclear Division have been named Certified Professional Secretaries (CPS) this year. That brings the Nuclear Division's total to 112, more CPS's than are employed by any other company in the U.S.

Those certified this year are Charlotte Lahndorff and Genevieve Warren, PGDP; Betty Maples, Wyvetta Ratledge and Beverly Vandergriff, ORGDP; and Emily Baer, Kay Hamilton, Mary Jimmerson, Bernice Massengill, Bettye Pope, Carolyn Sprizak and Patricia Wilson, ORNL.

To receive CPS status, they had four years to pass an examination that covers six topics important to a secretary's work. These areas include accounting, economics, business-oriented psychology, secretarial procedures, efficiency and setting work priorities, and business law.

In addition, the Institute for Certifying Secretaries, under the National Secretaries Association (NSA), has set minimum requirements, including working in an actual secretarial position. Membership in NSA is not a CPS requirement.

Incentives for becoming certified are varied. Self-improvement ranks highly among the reasons, with possible pay increases a close second. Additionally, fulfillment of the requirements and subsequent passage of the examinations for CPS carry 24 college credit hours which can be applied toward a bachelor's degree.

Lahndorff, Finance and Materials Division at PGDP, is clerk for the materials supervisor there. She has been with Carbide only since January, having worked previously at Peck Associates, Midwest Dairy and the *Paducah Sun-Democrat*. Lahndorff is a charter member of Women in Construction, and in 1975 was honored with the Woman in Construction of the Year award. Her father, Bob Murray, has been with Union Carbide for 25 years. Lahndorff lives at Wayncath Apartments, Paducah.

Warren is a secretary in the Fabrication and Maintenance Division, PGDP. Before joining the Nuclear Division 23 years ago, Warren was secretary to the vice president of Merit Clothing Company, Mayfield. She is a charter member of the Mayfield Chapter, NSA and served as its first president. Warren and her husband, Frank, live at Route 4, Mayfield.

Maples, document custodian in the Operations Analysis and Planning Division at ORGDP, has been at Carbide five years. A native of Knoxville, she attended Knoxville Business College, where she also was a

secretary. Maples has Atomic Energy Co. Planning as well. She lives in Powell.

Ratledge, a secretary in the Engineering Division, joined Carbide in 1972, from Cleveland State College with an associate degree. She has been with the company since 1973, and has volunteered with the United Front in St. Louis. Ratledge lives at 117 Ridge.

Vandergriff, accounting secretary in the ORGDP's General Accounting Division, is a native of LaFollette, Tennessee, with a degree in business administration and has attended Knoxville College. Vandergriff has been with Carbide five years, working in the Accounting Division 12 before transferring to the General Accounting Division at 127 Arkansas Avenue.

Baer is a secretary in the Operations Analysis and Planning Division. She joined the company in 1973 after finishing a

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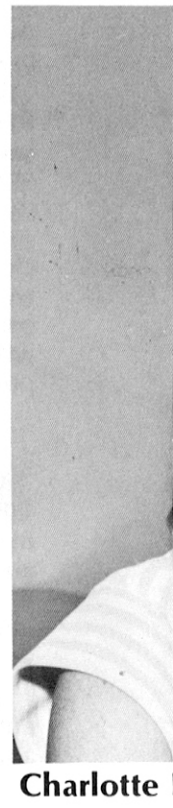


Patricia Wilson

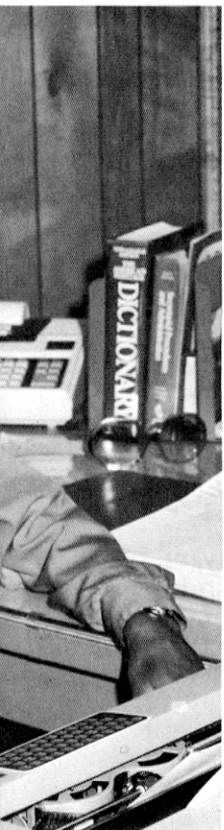
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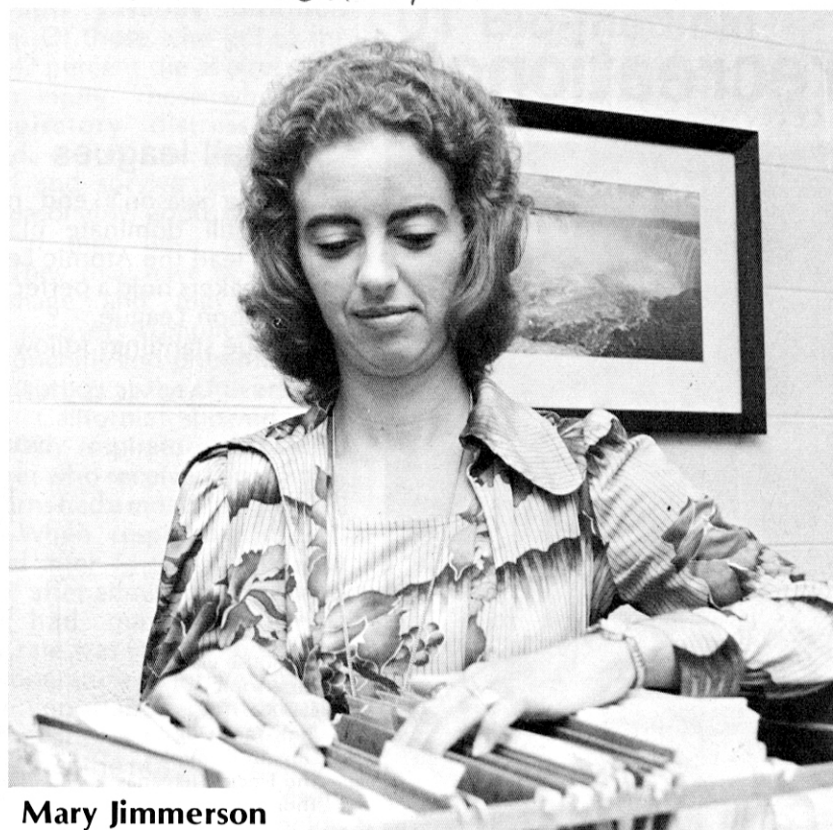
Emily Baer



Charlotte



Carolyn Sprizak



Mary Jimmerson

ny other company

erved as secretary for
mbined Operations
and her husband, Larry,

etary in ORGDP's
graduated in June,
d State Community
ate of science degree.
Nuclear Division since
ed secretarial skills for
Louis and in Cairo, Ill.
ast Vance Road, Oak

unting assistant in
ounting Division, is a
enn. She holds a B.S.
ministration from UT,
ville Business College.
n with the Nuclear
king as a secretary at Y-
o ORGDP. She lives at
Oak Ridge.

n ORNL's Operations
e Nuclear Division in
two-year secretarial

course at UT. Baer is a member of NSA. She
and her husband, Richard, who is employed
in the Plant and Equipment Division, live at
Route 17, Emory Road, Knoxville.

Hamilton, a typist in the Employee
Relations Division, ORNL, graduated from UT
in June with her B.S. in business
administration. A native of Columbia, Tenn.,
Hamilton is a new hire at the Nuclear Division.
She received a scholarship from the Oak
Ridge chapter, NSA, to take the CPS exam.
Hamilton and her husband, Greg, live at 3700
Sutherland Avenue, Knoxville.

Jimmerson, a secretary in Laboratory
Protection, ORNL, has been with the Nuclear
Division since 1972. Jimmerson was employed
by Vanderbilt University before joining
Carbide, and graduated from Aquinas Junior
College in Nashville. She is the daughter of
John G. Vance, a longtime employee in
ORGDP's Barrier Division. Jimmerson and her
husband, Keith, live at 8104 River Drive, Oak
Ridge.

Massengill, engineering assistant in ORNL's
Engineering Technology Division, has also
been a secretary in the Engineering Division.

Massengill currently is a senior at UT, where
she attends part-time. She has been with the
Nuclear Division since 1967, and lives at 133
Washburn Circle, Oak Ridge.

Pope, a native of Chattanooga, has been
with the Fusion Energy Division for 18 of her
29 years with Carbide. Pope is a member of
the Oak Ridge Chapter of NSA. She and her
husband, Jim, an employee at ORGDP, live at
100 Potomac Circle, Oak Ridge.

Sprizak is secretary to the manager of the
engineering materials section of the Metals
and Ceramics Division at ORNL. She holds an
associate in arts degree from Hiwassee
College and has been with the Nuclear
Division since 1972. Her husband, Joseph, also
is an employee in Metals and Ceramics. The
Sprizaks live at Route 4, Clinton.

Wilson, a secretary in the Metals and
Ceramics Division's Fuel Cycle Engineering
Group, joined the Nuclear Division in March,
1976, as a member of the secretarial pool. A
native of Harriman, she completed a two-year
secretarial course at UT. Wilson and her
husband, Charlie, live at Route 3, Yarnell
Road, Concord.



Beverly Vandergriff



ahndorff

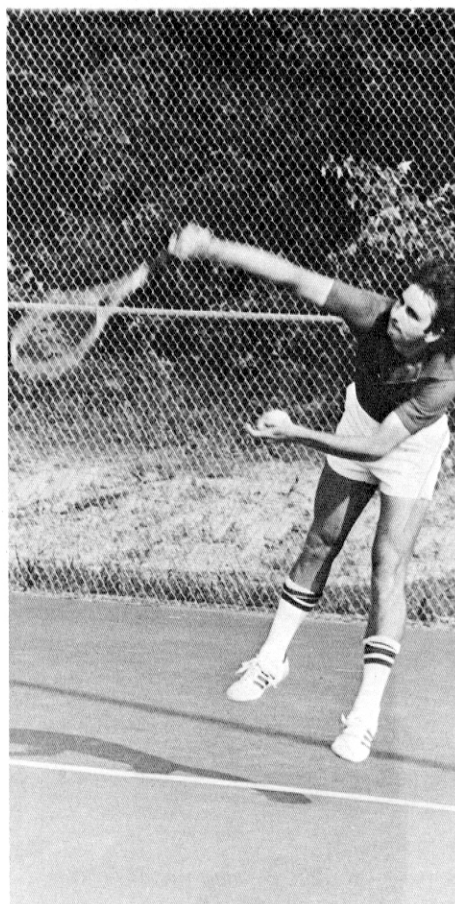


Bettye Pope



Betty Maples

recreationotes



HIGH HANDED TACTICS—Mark Trail, Paducah's Cascade Operations Division, gets "up in the air" about tennis. His enthusiastic attitude has figured heavily in placing him number one on the men's tennis ladder. Competition will continue through September when prizes will be awarded to top divisional players.

Hole-in-one . . .

ORNL golfers playing in the South Hill Golf League recently saw history made, as Pete Sothman aced number two hole. Playing the 181-yard hold, Pete scored his ace with a six iron. Witnesses, just as excited as he, were Ed Hensley, John Waggoner and Mitch Carter.

Paducah photo exhibit. . .

The Paducah plant photography exhibit and contest will be on view in the C-100 cafeteria through September 12. Prizes will be awarded in each category along with a "best of show" award. In addition, three camera bags will be distributed in a drawing held for non-winning entries.

Oak Ridge champ . . .



"Fitz"

Lou M. Fitzgerald, Y-12's Non-Destructive Testing Department, won the Oak Ridge Golf and Country Club championship held in July. Fitz topped Don Carpenter, two and one, for the honors.

Softball leagues . . .

As the season's end nears, two teams still dominate play, as the Snakes lead the Atomic League, and the Streakers hold a perfect record in the Carbon League.

League standings follow:

ATOMIC LEAGUE

TEAM	WON	LOST
Snakes	17	0
Shifters	16	2
Apaches	15	2
Over-The-Hill-Gang	14	2
Hawks	14	3
War Hogs	12	5
Bruins	11	7
Gashouse Gang	10	7
Supersonics	9	7
ESD	9	7
Junk Yard Dogs	8	8
Dugout Dummies	9	10
The Electric Bananas	8	9
Thunders	8	10
B. T. Express	7	9
Arties Army	6	8
Bad Nu's	7	10
Short Circuits	7	11
Nads	5	11
Bio-Rejects	3	12
Clinton Labs	2	13
The Black Sheep	1	16
Beta 4 Bunters	0	14

CARBON LEAGUE

TEAM	WON	LOST
Streakers	20	0
FES-KIDS	17	1
Forty-Niners	14	2
Knockers	14	4
CSD	15	5
Crippled Turkeys	13	5
Health Physiques	13	6
Killer Bees	13	6
League Leaders	10	7
Stinton's Stompers	9	8
Euler's Spoilers	9	9
Prime Time Players	9	10
Fed #1	9	10
Foul Balls	7	11
Fed #2	7	12
Up-Towners	7	12
Master Batters	6	11
Bombers	5	14
Tom's Turkeys	5	15
Pits	4	15
The Cad Pack	3	14
Odds 'n Ends	3	16

Swimming area closes

The swimming area at the Clark Center Recreation Park will close official Monday, September 5.

The park will officially close for the season September 30.

safe thinking . . .

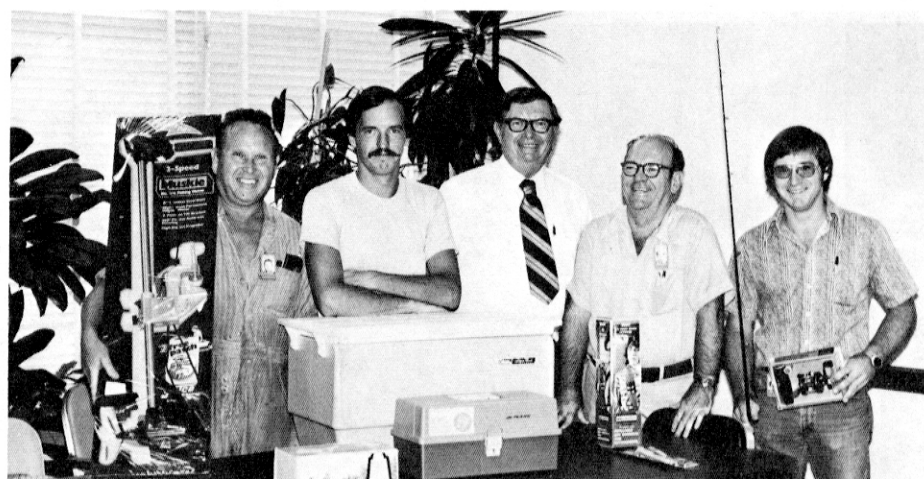
Editor's Note — Don't be selfish with your safety tips! Call the Nuclear Division News Office, and tell us your stories or hints on safety.

SEAT BELT USE

If all passenger car occupants used safety belts at all times, such use would save at least 12,000 lives annually by preventing ejection from the vehicle and reducing contact with the vehicle interior and other occupants.

BEHIND THE HEADLINES

Disasters are front-page news even though the lives lost in the United States are relatively few when compared to the day-to-day life losses from ordinary accidents.



HEAVY WEIGHTS—Paducah plant fishermen whose bream and spoonbill catches tipped the scales in their favor are shown with their winning prizes. From left are Charles W. Burdette, James D. Brown, Keith Bryant, Recreation Director, Hardy I. Pottinger and J. D. Turner. Contest rules require that fish be caught in public waters within a 100 mile radius of the plant and that they be measured and weighed by a bait shop or marina attendant.

Carbide bowling . . .

The Oops team stands a half-game out front on the Carbide Family Mixed League. Elmer Johnson rolled a 609 scratch recently to pace men; and Winnie Woody rolled a 526 series to pace the women bowlers.

The Union Carbiders Shifters see the Three Studs and a Filly out front by one game. Clarence Nelson's 564 high scratch series stands, as does Kenny Reeves' 666 handicap total.

Paducah fishing . . .

Paducah plant anglers active in the Western Kentucky waterways may also remain active in the plant's fishing contest. The "Rough fish except shad" category ended last week, but the "Annual Contest" remains open until October 31. Remember, all non-winning entries during the year are eligible for the four-man inflatable boat to be given away by drawing near the season's end.

Carbide golf . . .

The Dead Horse Lake League went to the Marrow-Kovan duo, inching out the Sothman-Jackson pair. Wyrick-Davis finished third as golfers put a lid on the 1977 season.

Carbide sleet league

Alan Van Hull, Y-12, took the July skeet highs, with a 48.610. He was followed by Helen Raaen, ORNL, with a 48.080; and Russell Allstun, Y-12, came in third, with a 47.706.

wanted



Purchasing

RIDERS needed to keep van pool from Knoxville to Oak Ridge Townsite, Purchasing, and Technical Information Center (TIC) via Magnolia Avenue and Clinton Highway, straight day. Jackie Smith, extension 3-4557, home phone 637-3868; or Al Seay, extension 3-4153 or 525-3061.

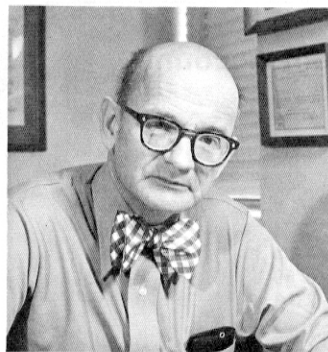
Lady bowlers . . .

Ladies are needed for the ORNL Ladies League will begin rolling at Ark Lanes, September 7. Employees' wives, as well as employees, are eligible to bowl in this league. Telephone Elizabeth Phipps, extension 3-5593; or Laura Walker, 3-5833, for more information.

COOL COLORS — Beat the heat with color this summer! A hot room or porch will seem cooler if they are painted in the cool colors — blue, violet, blue-gray, blue-green and white.



THE FES KIDS—The Fez Kids boast a 17-win, 1-loss record in the Carbon League. Action takes place at the Clark Center Recreation Park's ball fields.



Slaughter below, smoke above

by T. A. Lincoln, M.D.

(Editor's Note: Dr. Lincoln alternates his regular column with "The Medicine Chest," where he answers questions from employees concerning health in general. Questions are handled in strict confidence, as they are handled in our Question Box. Just address your question to "Medicine Chest," NUCLEAR DIVISION NEWS, Building 9704-2, Stop 20, Y-12, or call the news editor in your plant, and give him or her your question on the telephone.)

Eighty percent of the victims killed in fire disasters are never touched by flames. They die as the result of the inhalation of smoke. There is an urgent need for more people to understand this basic fact and to plan how they can prevent their own death if they get caught in a fire.

Smoke is defined as the visible mixture of suspended particulates in gases which is given off by a burning or smoldering substance. These particles vary in size, depending on the material which is burning, and the particular conditions of the fire. Wood fires generally produce relatively large particles, at least as far as the respiratory tract is concerned, while oil particles are often less than half as large. Larger particles tend to be trapped in the upper respiratory tract, while only extremely small particles get inhaled into the deep lung.

These particles are coated with acids and other toxic chemicals. In the heat of a fire, these chemicals are released as a vapor which condenses on the surface of the particles. Pure carbon is not irritating to the lung, but these other chemical condensates can be extremely toxic.

Toxic gases

It is not the particulate portion of smoke which kills so many people. Carbon monoxide, hydrogen sulfide and hydrogen cyanide are the three extremely toxic gases which can kill a person after only a few breaths if the concentration is high enough.

Carbon monoxide (CO) is by far the most common poisonous gas which kills people in fires. It is produced whenever carbonaceous material—and that is about everything burnable in buildings—has insufficient oxygen for complete combustion. It is lighter than air and any concentration above 0.05 percent is dangerous. The red blood cells have an affinity for CO that is over 200 times greater than for oxygen.

When 50 percent of the hemoglobin in red blood cells becomes saturated with CO, death

may occur within a few minutes. A 50 percent CO level in the blood can occur in 30 to 90 seconds after exposure to only a five percent mixture of CO and air. Only a one percent mixture in a room will cause a 50 percent level of CO in the blood in about five minutes. Most people are rendered unconscious when their blood level reaches 40 percent. Individuals with mild underlying and often still undetectable coronary heart disease (and that unfortunately means most men over age 45) are much more vulnerable to CO poisoning than young men or most women.

Heavier than air

Hydrogen sulfide, which smells like rotten eggs, may be produced when sulfur-containing materials are burned. It is especially hazardous when organic acids produced in the combustion process act on metallic sulfides. It is heavier than air, and any concentration above 0.02 percent is poisonous, and at 0.1 percent, is extremely dangerous.

Hydrogen cyanide (HCN), produced during the combustion of many organic materials, can kill in only a few breaths. Carbon dioxide which is the result of complete combustion is seldom a problem in fires, although it may displace oxygen. It and HCN (even in minuscule amounts) increase the breathing rate and cause a person to breathe greater quantities of other toxic materials such as CO. Many plastic materials produce extremely toxic and irritating fumes when they burn. Hydrochloric acid, phosgene or chlorine fumes are produced when polyvinyl or polyester materials burn.

Isocyanates are released from polyurethane foam and hydrofluoric acid is generated when polyfluorocarbons such as Teflon burn. No recently constructed or furnished home or room is devoid of these and other plastic materials. They are everywhere!

Fatality statistics

Fifty-three percent of victims who die at the scene of the fire have succumbed to the toxic effects of

smoke and gaseous products inhalation. Of those who get to the hospital, 42 percent die as a result of inhalation injury. Those who have had respiratory distress which developed before or soon after admission and survive 24-48 hours have a reasonably good chance of recovery if they have not been burned. They may have permanent lung damage and may have a "stormy" recovery complicated by a severe bronchitis and pneumonia.

A recent study at the University of Southern California showed that patients with respiratory distress of acute onset who received no, or only minor, burns had a mortality rate of 11 percent. When respiratory distress developed after 24 to 48 hours—or even later after admission, especially if they had major burns—the mortality rate was 60 to 70 percent.

The temperature of inhaled smoke is of little importance. Nontoxic dry gases that are hot when inhaled through either the nose or mouth are quickly cooled to a non-dangerous level, making thermal burns below the larynx rare. Steam is more dangerous than dry gases, but the heat exchange efficiency of the upper respiratory tract is so fantastically efficient that burns in the lung are rare.

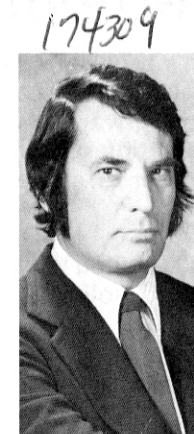
Crawling advisable

The lesson which needs to be learned is that smoke alone can be rapidly fatal. Once a fire is under way there is little that can be done other than trying to get out of the building as quickly as possible. Crawling on the floor helps to avoid carbon monoxide, but may bring a person into heavier concentrations of hydrogen sulfide and other heavier than air gases. In beginning fires, carbon monoxide is the greatest hazard, so crawling is advisable.

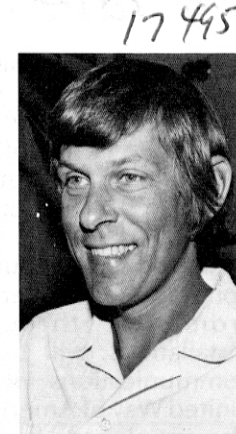
Planning ahead is the major defense against inhalation injury. Here are some "safe thinking" tips on fire:

- Install one or several smoke detectors in your home.
- Always have a flashlight (which works!) at your bedside table.
- Know the shortest escape route so it can be followed without thought. Also have an alternative route thought out.
- Whenever you sleep in a hotel or motel, carefully note where the fire escapes and stairs are located.
- When you enter a restaurant or night club, think for a moment of what you would do if somebody yelled "Fire!" If the room is overcrowded and nearby exits are not available, back out and go someplace else. Although many fire regulations have been established, they are frequently ignored. Your comment to the management as you leave may help raise the level of consciousness for fire safety in public establishments.

UT Bio-medical officials named



Barnett



Preston

W. Edgar Barnett has been named director and R. Julian Preston associate director of the University of Tennessee-Oak Ridge Graduate School of Biomedical Sciences, University officials have announced.

Both Barnett and Preston were members of the research staff in ORNL's Biology Division at the time of their appointments. In his new position Barnett succeeds Daniel Billen, who will become director of the Radiation Biology Program at the University of Tennessee and a professor in the Biomedical School.

The Biomedical School, which is part of the University of Tennessee's Graduate School, is operated in conjunction with the Biology Division, where its students conduct their research.

A native of Belton, Tex., Barnett received his B.S. degree in biology from Southwestern University (Georgetown, Tex.), his M.S. in biology from Northwestern University and his Ph.D. in experimental biology from Florida State University. He has been associated with ORNL since 1961, when he accepted a U.S. Public Health Service postdoctoral fellowship here.

He became a permanent staff member in 1963, and for five years he was scientific director of the Biology Division's genetics and developmental biology section. In 1967 he was named chairman of the Biomedical School's Genetics Curriculum Committee in addition to his regular research duties, a position which he held at the time of his present appointment.

Barnett, a member of the American Society of Biological Chemists, Sigma Xi and the Genetics Society of America, lives at 107 Normandy Road, Oak Ridge, with his wife, Barbara. They have three sons.

Preston was born in London, England, and received his B.A. and M.A. degrees in genetics from Cambridge University. He received his Ph.D. in radiation biology from Reading University in England.

He was a member of the scientific staff at the Medical Research Council Radiobiology Unit, Harwell, Berkshire, England, for eight years before joining the ORNL Biology Division's mammalian cytogenetics group in 1970.

He has been on the editorial board of *Mutation Research* and a part-time faculty member and lecturer in the Biomedical School. Preston, his wife, Andrea, and their three children live at 12 Mona Lane, Oak Ridge.

safety scoreboard

Time worked without a lost-time accident through August 28:

Paducah	37 Days	505,440 Man-Hours
ORGDP	122 Days	4,001,400 Man-Hours
Y-12 Plant	194 Days	5,935,000 Man-Hours
ORNL	125 Days	2,739,831 Man-Hours

safe thinking

WHEEL STOP—Carry a brick in the trunk of your car as insurance in the case of flat tires. It makes a good wheel chock, when used along with the hand brake, while you're changing a tire.

United Way campaign ready for late September kickoff

The Nuclear Division's 1977 United Way campaign for Oak Ridge area employees will get underway this month with a kickoff meeting set for Friday morning, September 23, at the Oak Ridge Civic Center.

Principal speaker for the event, to be attended by about 400 United Way committee members and solicitors from the three Oak Ridge installations, will be Sandy Harner, communications vice president for United Way of America. Brief remarks also are planned by Nuclear Division President Roger F. Hibbs and by Herman G. P. Snyder, the Division's 1977 United Way general chairman.

Agencies plan displays

As the second part of the kickoff program, more than 40 representative United Way agencies from Anderson, Knox, Loudon, Morgan and Roane counties will sponsor displays and exhibits for viewing by participants.

Special "thank you" letters will be mailed September 21 to some 7,000 employees who are Continuing Needed Share givers—that is, who have authorized Central Payroll to make Needed Share deductions from



TESTING THE WATER—A young client at Daniel Arthur Rehabilitation Center in Oak Ridge checks out some of the Center's physical therapy equipment. Daniel Arthur is just one of more than 70 East Tennessee agencies which benefit from the Nuclear Division's annual United Way campaign, slated to begin this year on September 23.

their paychecks on a continuing annual basis. (The Division's

Savings Plan—Personal Investment Account

Recent unit values:

	Fixed Income Fund	UCC Stock	Equity Investment Fund
December 75	11.9880	58.7886	7.8231
December 76	13.0554	59.2723	8.8167
May 77	13.5196	52.4283	7.8699
June 77	13.6146	50.6769	8.2772
July 77	13.7097	48.7163	8.1436

Note: Fixed Income Fund unit values reflect interest additions to achieve the guaranteed effective annual interest rate of 8.70% for 1977. Union Carbide stock values are the average cost of stock purchases during the month plus brokerage charges. Equity Investment Fund unit values represent the month-end market value of securities held by the Fund. The price for each unit is determined by dividing the total value of the securities by the number of units in the Fund.

definition of the Needed Share contribution includes three categories: six-tenths, four-tenths, or a minimum of three-tenths of one percent of an employee's base pay.)

All 1977 contributors will receive the lapel pin, which has been changed this year from the "check mark" symbol to a stylized cutout design of three people holding hands.

Videotape produced

Another new feature for this year's drive is a 20-minute videotape which has been produced by the Nuclear Division's 1977 United Way general

committee, designed to give employees an overview of some of the types of agencies which are included in the Division's five-county (Anderson, Knox, Loudon, Morgan and Roane) campaign. Scheduled showings of the videotape will be announced for each of the Oak Ridge installations in September.

The Paducah Plant's campaign is scheduled to begin Monday, September 19. Special issues of *Nuclear Division News* devoted to the United Way campaigns for both Oak Ridge and Paducah employees will be mailed September 22.

Nuclear Division News

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COMMUNICATORS



Named engineer at Y-12 Plant



Wisner

Joel D. Wisner has been named an engineer in Y-12's General Engineering.

He joined Union Carbide in January of this year, shortly after his graduation from New Mexico State University.

He and his wife, Deborah, live at 716 Broome Road, Knoxville.



AHOY THERE—Environmental Sciences Division personnel demonstrate an effective extension rescue technique which they learned as part of an aquatic safety course taught this summer. The "man overboard" is Joe Gooch; his rescuer is Brenda Taylor.

ESD water safety course

A creative application of the Nuclear Division's Safety Policy was made this summer in the form of a basic rescue and water safety course, in ORNL's Environmental Sciences Division (ESD).

The course was designed primarily to provide ESD aquatic ecology section personnel, who routinely work around water, with the knowledge and skills to save their own and others' lives in an emergency. Emphasis was placed on learning the correct responses to aquatic emergencies as well as safe job performance around aquatic environments.

As taught by Ron McConathy, research associate in forest ecology, classroom instruction plus skills training and practice at the Oak Ridge Swimming Pool were combined for a total of 10 course sessions. McConathy is a certified water safety instructor for the Red Cross, and has taught swimming and lifesaving for seven years.

Those persons taking the course were: Fay Andrews, Dave Carroll, David Cox, Lynn Dye, Jerry Elwood, Joe Gooch, Jack Griffith, Steve Hildebrand, Darrell Jenkins, James Loar, Melinda Lee, Ben Parkhurst, Jean Solomon, Robert Stark, Jay Story, Mack Stubbs, Sam Suffern and John Trabalka.

Participants who were able to master a certain skill level were eligible to apply for Red Cross certification in "Basic Rescue and Water Safety." Eight persons received certification.

Another water safety course, taught by Dave Carroll and emphasizing boating safety, also will be offered to aquatic ecology section personnel this summer.



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